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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,145	07/18/2003	George K. Stookey	22076-2	5211

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EXAMINER

SAYALA, CHHAYA D

ART UNIT

PAPER NUMBER

1761

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,145

Applicant(s)

STOOKEY, GEORGE K.

Examiner

C. SAYALA

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spanier et al. (US Patents 5011679 and 5114704) in view of Witt et al. (U Patent 6350438) and Miyake et al. (US Patent 4913895) taken with Glandorf (US Patent 5820853) and further in view of Perlberg et al. (US Patent 6223643).

Both the Spanier patents teach rawhide being coated with inorganic pyrophosphate with the formula $M_{n+2}P_nO_{3n+1}$ (see col. 12, lines 6-13 in both), wherein the pyrophosphates are known to be anti-tartar, anti-plaque or anti-calculus agents. (Col. 9, lines 55-60, col. 9, lines 58-59, respectively). In Spanier '704, the patentees teach that the coated rawhide can be used for both dogs as well as cats (col. 14, lines 25+ in '704). Also, note the amounts of pyrophosphate in Table 1, 0.25-5%. The patentees also teach using such a coating on other dog foods, such as biscuits. The patent teaches packaging such products. It would therefore, have been obvious to package the rawhide coated product too, and packaging such rawhide chews is a commonplace expedient as any store which sells such products will show. The patent does not teach tripolyphosphates or cetyl pyridinium salts.

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Witt et al. teach antiplaque antimicrobial agents in an amount of at least .01% by weight. See cetyl pyridinium chloride shown at col. 16, line 43, as such an agent. The patent also discloses tripolyphosphate as an anti-calculus agent in an amount 1.5-15%. See col. 14, line 51, col. 15, lines 17-23, line 40 and specifically line 32. The composition is applied to chews such as rawhide (col. 19, lines 7, 10-11) or even incorporated into the rawhide product (lines 9-11, col. 19). Witt et al. specifically teach that tripolyphosphate may be used in place of pyrophosphates, suggesting therefore, the replacement of pyrophosphate of Spanier et al. with tripolyphosphate.

The next two references are used to establish what was already known in prior art at the time the invention was made. Miyake et al. teach that (col. 1):

Furthermore, it is known that polyphosphates have inhibited the caries in animal tests (e.g., Journal of Dental Research, Vol. 43, p 1123-1136) and also possess antibacterial activity against Streptococcus mutans and Diphtheroids (e.g., Arch. Oral Biol. Vol. 27, p 809-816, 1982 and Infection and Immunity, Vol. 1, p 604-606, 1970). Furthermore, Arch. Oral Biol., Vol. 15, p 893-896(1970) discloses the effectiveness of a water-soluble phosphate against the formation of calculus.

Glandorf is pertinent for its teaching at col. 5 that polyphosphates were known in the art as far back as 1997 as tartar control agents or anticalculus agents. The formulation is basically a homogeneous combination (see examples) of polyphosphates with an antimicrobial such as cetyl pyridinium chloride. See claims 1, 9 and 10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply on or incorporate in rawhide, such as that of Spanier et al. with the polyphosphate of Witt et al. for its benefit as an anti-calculus agent and to

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combine such a composition with cetyl pyridinium salt, also disclosed by Witt et al., for its established benefit as an antimicrobial agent. To apply the amounts or to optimize the ranges shown by the above references when such a combination is made would have been within the realm of the artisan, bearing in mind the usefulness of the two ingredients, each for its established utility and benefit for rawhide application. To provide the number of chews to a pet would have been obvious also, depending on the advice of a veterinarian or as desired by the pet owner. With regard to claims 3 and 4 or 22, Perlberg et al. is exemplary in teaching the formation of rawhide chews in which at least one antimicrobial is used for treating the rawhide which is chopped to bits before being mixed with the other ingredients as well as a binder (col. 4, line 51+). Therefore to follow such a patent and then to apply the composition of the combination of an anticalculus agent and an antimicrobial agent both shown as being useful when applied to a rawhide by the Witt et al. reference, would have been obvious. Also note that the Glandorf patent teaches that the combination of the anticalculus polyphosphate and antimicrobial cetyl pyridinium chloride was beneficial in an oral composition that provides further motivation to make the same combination, in addition to and based on the teachings of Witt et al.

Response to Arguments

Applicant's arguments filed 8/8/06 have been fully considered but they are not persuasive.

In response to applicant's argument that the rejection is based on "obvious to try", the rejection has been re-written to emphasize that animal studies in 1982 showed that tripolyphosphate was effective as an anticalculus agent (Miyake et al.). Glandorf teaches a homogeneous combination of tripolyphosphate and cetyl pyridinium chloride as anticalculus and antimicrobial as being beneficial as an oral composition. Witt et al. teach that tripolyphosphate and cetyl pyridinium chloride can be used on or incorporated in rawhide chews, and also that tripolyphosphate can be used in place of tetrapolyphosphate, enabling a substitution of the tetrapolyphosphate in Spanier's invention that is drawn to a rawhide product. Perlberg teaches the same preparation as claimed herein, of a rawhide chew that is manufactured from rawhide bits. One of ordinary skill in the art would have considered such a reference mainly because it relates to manufacturing a chew from rawhide.

At page 10, applicant states that the instant invention involves reactivity and physiological response leading to unpredictability. As enumerated above, both compounds and their corresponding functions, not just as anticalculus and antimicrobials, but *in animal chews and in animal studies*, appear to be well documented, and their use together has been established as being effective and beneficial as an oral composition. In fact, Witt et al teach their use together in rawhide chews. Therefore, applicant's argument is weak at best.

Applicant's pointing out Example 1 to show that the combination "is compatible and active" has been considered, but based on the above showing, is not unexpected. Applicant states that the incorporation of the combination in a dog chew product led to

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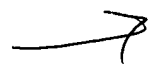
significant improvements. Based on the suggestion, motivation to combine, and the combination itself shown by the above prior art references as applied, "It is well settled that a patent cannot be properly granted for [an invention] which would flow naturally from the teaching of the prior art". *American Infra-Red Radiant Co. v Lambert Indus., Inc.*, 360 F.2d 977, 986 [149 USPQ 722 (CCPA 1958)], (8th Cir.) (quoting *Application of Libby*, 255 F.2d 412 [118 USPQ 194 (CCPA 1958)], *CERT. DENIED*, 385 U.S. 920 [151 USPQ 757](1966).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. SAYALA whose telephone number is 571-272-1405.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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A handwritten signature in black ink, appearing to read 'C. Sayala', with a stylized, cursive script.

C. SAYALA
Primary Examiner
Group 1700.